OIPE



DATE: 02/11/2002 TIME: 14:30:53 RAW SEQUENCE LISTING PATENT APPLICATION: US/09/772,134B

Output Set: N:\CRF3\02112002\I772134B.raw 3 <110> APPLICANT: Southern Illinois University 4 Lightfoot, David 5 Meksem, Khalid 7 <120> TITLE OF INVENTION: ISOLATED POLYNUCLEOTIDES AND POLYPEPTIDES RELATING TO LOCI UNDERLYING 8 RESISTANCE TO SOYBEAN CYST NEMATODE AND SOYBEAN SUDDEN DEATH SYNDROME AND 9 METHODS EMPLOYING SAME 11 <130> FILE REFERENCE: 1268/4/2 13 <140> CURRENT APPLICATION NUMBER: 09/772,134B 14 <141> CURRENT FILING DATE: 2001-01-29 16 <150> PRIOR APPLICATION NUMBER: 60/178,811 17 <151> PRIOR FILING DATE: 2000-01-28 19 <160> NUMBER OF SEQ ID NOS: 122 21 <170> SOFTWARE: Patentin version 3.0 23 <210> SEQ ID NO: 1 24 <211> LENGTH: 87 25 <212> TYPE: DNA 26 <213> ORGANISM: soybean 28 <400> SEQUENCE: 1 29 gaattcatgg tttctcttat gacattgttg ceaagtaata ctactatata aattcagatt 60 31 tgggtttctg ataaccgtgg tcgttaa 87 34 <210> SEQ ID NO: 2 35 <211> LENGTH: 92 36 <212> TYPE: DNA 37 <213> ORGANISM: soybean 39 <400> SEQUENCE: 2 40 gaattcatgg tttctcttat cttatgacat tgttgccaag taatactact atataaattc 60 42 agatttagg tttctcttat cttatgacat tgttgccaag taatactact atataaattc 60 43 agatttagg tttctcttat cttatgacat tgttgccaag taatactact atataaattc 60 44 capatttagg tttctcttat cttatgacat tgttgccaag taatactact atataaattc 60 45 <210> SEQ ID NO: 3
4 Lightfoot, David 5 Meksem, Khalid 7 <120> TITLE OF INVENTION: ISOLATED POLYNUCLEOTIDES AND POLYPEPTIDES RELATING TO LOCI UNDERLYING 8 RESISTANCE TO SOYBEAN CYST NEMATODE AND SOYBEAN SUDDEN DEATH SYNDROME AND 9 METHODS EMPLOYING SAME 11 <130> FILE REFERENCE: 1268/4/2 13 <140> CURRENT APPLICATION NUMBER: 09/772,134B 14 <141> CURRENT FILING DATE: 2001-01-29 16 <150> PRIOR APPLICATION NUMBER: 60/178,811 17 <151> PRIOR FILING DATE: 2000-01-28 19 <160> NUMBER OF SEQ ID NOS: 122 21 <170> SOFTWARE: PatentIn version 3.0 23 <210> SEQ ID NO: 1 24 <211> LENGTH: 87 25 <212> TYPE: DNA 26 <213> ORGANISM: soybean 28 <400> SEQUENCE: 1 29 gaattcatgg ttctcttat gacattgttg ccaagtaata ctactatata aattcagatt 60 31 tgggttctg ataaccgtgg tcgttaa 87 34 <210> SEQ ID NO: 2 35 <211> LENGTH: 92 36 <212> TYPE: DNA 37 <213> ORGANISM: soybean 39 <400> SEQUENCE: 2 40 gaattcatgg ttctcttat cttatgacat tgttgccaag taatactact atataaattc 60 42 agatttggt ttcagataac cgtggtcgtt aa 60 42 agatttgggt ttcagataac cgtggtcgtt aa 60 43 cgtg ID NO: 3
4 Lightfoot, David 5 Meksem, Khalid 7 <120> TITLE OF INVENTION: ISOLATED POLYNUCLEOTIDES AND POLYPEPTIDES RELATING TO LOCI UNDERLYING 8 RESISTANCE TO SOYBEAN CYST NEMATODE AND SOYBEAN SUDDEN DEATH SYNDROME AND 9 METHODS EMPLOYING SAME 11 <130> FILE REFERENCE: 1268/4/2 13 <140> CURRENT APPLICATION NUMBER: 09/772,134B 14 <141> CURRENT FILING DATE: 2001-01-29 16 <150> PRIOR APPLICATION NUMBER: 60/178,811 17 <151> PRIOR FILING DATE: 2000-01-28 19 <160> NUMBER OF SEQ ID NOS: 122 21 <170> SOFTWARE: PatentIn version 3.0 23 <210> SEQ ID NO: 1 24 <211> LENGTH: 87 25 <212> TYPE: DNA 26 <213> ORGANISM: soybean 28 <400> SEQUENCE: 1 29 gaattcatgg ttctcttat gacattgttg ccaagtaata ctactatata aattcagatt 60 31 tgggttctg ataaccgtgg tcgttaa 87 34 <210> SEQ ID NO: 2 35 <211> LENGTH: 92 36 <212> TYPE: DNA 37 <213> ORGANISM: soybean 39 <400> SEQUENCE: 2 40 gaattcatgg ttctcttat cttatgacat tgttgccaag taatactact atataaattc 60 42 agatttggt ttcagataac cgtggtcgtt aa 60 42 agatttgggt ttcagataac cgtggtcgtt aa 60 43 cgtg ID NO: 3
Meksem, Khalid 7 <120> TITLE OF INVENTION: ISOLATED POLYNUCLEOTIDES AND POLYPEPTIDES RELATING TO LOCI UNDERLYING 8 RESISTANCE TO SOYBEAN CYST NEMATODE AND SOYBEAN SUDDEN DEATH SYNDROME AND 9 METHODS EMPLOYING SAME 11 <130> FILE REFERENCE: 1268/4/2 13 <140> CURRENT APPLICATION NUMBER: 09/772,134B 14 <141> CURRENT FILING DATE: 2001-01-29 16 <150> PRIOR APPLICATION NUMBER: 60/178,811 17 <151> PRIOR FILING DATE: 2000-01-28 19 <160> NUMBER OF SEQ ID NOS: 122 21 <170> SOFTWARE: PatentIn version 3.0 23 <210> SEQ ID NO: 1 24 <211> LENGTH: 87 25 <212> TYPE: DNA 26 <213> ORGANISM: soybean 28 <400> SEQUENCE: 1 29 gaatcatgd ttetettat gacattgttg ceaagtaata ctactatata aattcagatt 60 31 tgggtttetg ataaccgtgd tegttaa 87 34 <210> SEQ ID NO: 2 35 <211> LENGTH: 92 36 <212> TYPE: DNA 37 <213> ORGANISM: soybean 39 <400> SEQUENCE: 2 40 gaattcatgd ttetettat ctatagacat tgttgceaag taatactact atataaattc 60 42 agatttggdt ttecagataac egtggtegtt aa 92 45 <210> SEQ ID NO: 3
7 <120> TITLE OF INVENTION: ISOLATED POLYNUCLEOTIDES AND POLYPEPTIDES RELATING TO LOCI UNDERLYING 8 RESISTANCE TO SOYBEAN CYST NEMATODE AND SOYBEAN SUDDEN DEATH SYNDROME AND 9 METHODS EMPLOYING SAME 11 <130> FILE REFERENCE: 1268/4/2 13 <140> CURRENT APPLICATION NUMBER: 09/772,134B 14 <141> CURRENT FILING DATE: 2001-01-29 16 <150> PRIOR APPLICATION NUMBER: 60/178,811 17 <151> PRIOR FILING DATE: 2000-01-28 19 <160> NUMBER OF SEQ ID NOS: 122 21 <170> SOFTWARE: PatentIn version 3.0 23 <210> SEQ ID NO: 1 24 <211> LENGTH: 87 25 <212> TYPE: DNA 26 <213> ORGANISM: soybean 28 <400> SEQUENCE: 1 29 gaatcatgg ttectetat gacattgttg ccaagtaata ctactatata aattcagatt 60 31 tgggtttctg ataaccgtgg tcgttaa 87 34 <210> SEQ ID NO: 2 35 <211> LENGTH: 92 36 <212> TYPE: DNA 37 <213> ORGANISM: soybean 39 <400> SEQUENCE: 2 40 gaattcatgg ttectetat cttatgacat tgttgccaag taatactact atataaattc 60 42 agatttgggt ttcagataac cgtggtcgtt aa 92 45 <210> SEQ ID NO: 3
UNDERLYING 8 RESISTANCE TO SOYBEAN CYST NEMATODE AND SOYBEAN SUDDEN DEATH SYNDROME AND METHODS EMPLOYING SAME 11 <130> FILE REFERENCE: 1268/4/2 13 <140> CURRENT APPLICATION NUMBER: 09/772,134B 14 <141> CURRENT FILING DATE: 2001-01-29 16 <150> PRIOR APPLICATION NUMBER: 60/178,811 17 <151> PRIOR FILING DATE: 2000-01-28 19 <160> NUMBER OF SEQ ID NOS: 122 21 <170> SOFTWARE: PatentIn version 3.0 23 <210> SEQ ID NO: 1 24 <211> LENGTH: 87 25 <212> TYPE: DNA 26 <213> ORGANISM: soybean 28 <400> SEQUENCE: 1 29 gaattcatgg tttctcttat gacattgttg ccaagtaata ctactatata aattcagatt 60 31 tgggttctg ataaccgtgg tcgttaa 87 34 <210> SEQ ID NO: 2 35 <211> LENGTH: 92 36 <212> TYPE: DNA 37 <213> ORGANISM: soybean 39 <400> SEQUENCE: 2 40 gaattcatgg tttctcttat cttatgacat tgttgccaag taatactact atataaattc 60 42 agatttgggt tttcagataac cgtggtcgtt aa 92 45 <210> SEQ ID NO: 3
9 METHODS EMPLOYING SAME 11 <130> FILE REFERENCE: 1268/4/2 13 <140> CURRENT APPLICATION NUMBER: 09/772,134B 14 <141> CURRENT FILING DATE: 2001-01-29 16 <150> PRIOR APPLICATION NUMBER: 60/178,811 17 <151> PRIOR FILING DATE: 2000-01-28 19 <160> NUMBER OF SEQ ID NOS: 122 21 <170> SOFTWARE: PatentIn version 3.0 23 <210> SEQ ID NO: 1 24 <211> LENGTH: 87 25 <212> TYPE: DNA 26 <213> ORGANISM: soybean 28 <400> SEQUENCE: 1 29 gaattcatgg tttctcttat gacattgttg ccaagtaata ctactatata aattcagatt 60 31 tgggtttctg ataaccgtgg tcgttaa 87 34 <210> SEQ ID NO: 2 35 <211> LENGTH: 92 36 <212> TYPE: DNA 37 <213> ORGANISM: soybean 39 <400> SEQUENCE: 2 40 gaattcatgg tttctcttat cttatgacat tgttgccaag taatactact atataaattc 60 42 agatttgggt ttcagataac cgtggtcgtt aa 92 45 <210> SEQ ID NO: 3
11 <130> FILE REFERENCE: 1268/4/2 13 <140> CURRENT APPLICATION NUMBER: 09/772,134B 14 <141> CURRENT FILING DATE: 2001-01-29 16 <150> PRIOR APPLICATION NUMBER: 60/178,811 17 <151> PRIOR FILING DATE: 2000-01-28 19 <160> NUMBER OF SEQ ID NOS: 122 21 <170> SOFTWARE: PatentIn version 3.0 23 <210> SEQ ID NO: 1 24 <211> LENGTH: 87 25 <212> TYPE: DNA 26 <213> ORGANISM: soybean 28 <400> SEQUENCE: 1 29 gaattcatgg tttctcttat gacattgttg ccaagtaata ctactatata aattcagatt 60 31 tgggtttctg ataaccgtgg tcgttaa 87 34 <210> SEQ ID NO: 2 35 <211> LENGTH: 92 36 <212> TYPE: DNA 37 <213> ORGANISM: soybean 39 <400> SEQUENCE: 2 40 gaattcatgg tttctcttat cttatgacat tgttgccaag taatactact atataaattc 60 42 agatttgggt ttcagataac cgtggtcgtt aa 92 45 <210> SEQ ID NO: 3
13 <140> CURRENT APPLICATION NUMBER: 09/772,134B 14 <141> CURRENT FILING DATE: 2001-01-29 16 <150> PRIOR APPLICATION NUMBER: 60/178,811 17 <151> PRIOR FILING DATE: 2000-01-28 19 <160> NUMBER OF SEQ ID NOS: 122 21 <170> SOFTWARE: Patentin version 3.0 23 <210> SEQ ID NO: 1 24 <211> LENGTH: 87 25 <212> TYPE: DNA 26 <213> ORGANISM: soybean 28 <400> SEQUENCE: 1 29 gaattcatgg tttctcttat gacattgttg ccaagtaata ctactatata aattcagatt 60 31 tgggtttctg ataaccgtgg tcgttaa 87 34 <210> SEQ ID NO: 2 35 <211> LENGTH: 92 36 <212> TYPE: DNA 37 <213> ORGANISM: soybean 39 <400> SEQUENCE: 2 40 gaattcatgg tttctcttat cttatgacat tgttgccaag taatactact atataaattc 60 42 agatttgggt ttcccttat cttatgacat tgttgccaag taatactact atataaattc 60 42 agatttgggt ttccgttat cttatgacat tgttgccaag taatactact atataaattc 60 42 agatttgggt ttcagataac cgtggtcgtt aa 92 45 <210> SEQ ID NO: 3
14 <141> CURRENT FILING DATE: 2001-01-29 16 <150> PRIOR APPLICATION NUMBER: 60/178,811 17 <151> PRIOR FILING DATE: 2000-01-28 19 <160> NUMBER OF SEQ ID NOS: 122 21 <170> SOFTWARE: PatentIn version 3.0 23 <210> SEQ ID NO: 1 24 <211> LENGTH: 87 25 <212> TYPE: DNA 26 <213> ORGANISM: soybean 28 <400> SEQUENCE: 1 29 gaattcatgg tttctcttat gacattgttg ccaagtaata ctactatata aattcagatt 60 31 tgggttctg ataaccgtgg tcgttaa 87 34 <210> SEQ ID NO: 2 35 <211> LENGTH: 92 36 <212> TYPE: DNA 37 <213> ORGANISM: soybean 39 <400> SEQUENCE: 2 40 gaattcatgg tttctcttat cttatgacat tgttgccaag taatactact atataaattc 60 42 agatttgggt ttcagataac cgtggtcgtt aa 92 45 <210> SEQ ID NO: 3
16 <150> PRIOR APPLICATION NUMBER: 60/178,811 17 <151> PRIOR FILING DATE: 2000-01-28 19 <160> NUMBER OF SEQ ID NOS: 122 21 <170> SOFTWARE: PatentIn version 3.0 23 <210> SEQ ID NO: 1 24 <211> LENGTH: 87 25 <212> TYPE: DNA 26 <213> ORGANISM: soybean 28 <400> SEQUENCE: 1 29 gaattcatgg ttctcttat gacattgttg ccaagtaata ctactatata aattcagatt 60 31 tgggtttctg ataaccgtgg tcgttaa 87 34 <210> SEQ ID NO: 2 35 <211> LENGTH: 92 36 <212> TYPE: DNA 37 <213> ORGANISM: soybean 39 <400> SEQUENCE: 2 40 gaattcatgg tttctctat cttatgacat tgttgccaag taatactact atataaattc 60 42 agatttggg tttctctat cttatgacat tgttgccaag taatactact atataaattc 60 42 agatttggt ttcagataac cgtggtcgtt aa 92 45 <210> SEQ ID NO: 3
17 <131> PRIOR FILING DATE. 2000 01 20 19 <160> NUMBER OF SEQ ID NOS: 122 21 <170> SOFTWARE: PatentIn version 3.0 23 <210> SEQ ID NO: 1 24 <211> LENGTH: 87 25 <212> TYPE: DNA 26 <213> ORGANISM: soybean 28 <400> SEQUENCE: 1 29 gaattcatgg tttctcttat gacattgttg ccaagtaata ctactatata aattcagatt 60 31 tgggttctg ataaccgtgg tcgttaa 87 34 <210> SEQ ID NO: 2 35 <211> LENGTH: 92 36 <212> TYPE: DNA 37 <213> ORGANISM: soybean 39 <400> SEQUENCE: 2 40 gaattcatgg tttctcttat cttatgacat tgttgccaag taatactact atataaattc 60 42 agatttgggt ttcagataac cgtggtcgtt aa 92 45 <210> SEQ ID NO: 3
17 <131> PRIOR FILING DATE. 2000 01 20 19 <160> NUMBER OF SEQ ID NOS: 122 21 <170> SOFTWARE: PatentIn version 3.0 23 <210> SEQ ID NO: 1 24 <211> LENGTH: 87 25 <212> TYPE: DNA 26 <213> ORGANISM: soybean 28 <400> SEQUENCE: 1 29 gaattcatgg tttctcttat gacattgttg ccaagtaata ctactatata aattcagatt 60 31 tgggttctg ataaccgtgg tcgttaa 87 34 <210> SEQ ID NO: 2 35 <211> LENGTH: 92 36 <212> TYPE: DNA 37 <213> ORGANISM: soybean 39 <400> SEQUENCE: 2 40 gaattcatgg tttctcttat cttatgacat tgttgccaag taatactact atataaattc 60 42 agatttgggt ttcagataac cgtggtcgtt aa 92 45 <210> SEQ ID NO: 3
21 <170> SOFTWARE: PatentIn version 3.0 23 <210> SEQ ID NO: 1 24 <211> LENGTH: 87 25 <212> TYPE: DNA 26 <213> ORGANISM: soybean 28 <400> SEQUENCE: 1 29 gaattcatgg tttctcttat gacattgttg ccaagtaata ctactatata aattcagatt 60 31 tgggttctg ataaccgtgg tcgttaa 87 34 <210> SEQ ID NO: 2 35 <211> LENGTH: 92 36 <212> TYPE: DNA 37 <213> ORGANISM: soybean 39 <400> SEQUENCE: 2 40 gaattcatgg tttctcttat cttatgacat tgttgccaag taatactact atataaattc 60 42 agatttgggt ttcagataac cgtggtcgtt aa 92 45 <210> SEQ ID NO: 3
23 <210> SEQ ID NO: 1 24 <211> LENGTH: 87 25 <212> TYPE: DNA 26 <213> ORGANISM: soybean 28 <400> SEQUENCE: 1 29 gaattcatgg tttctcttat gacattgttg ccaagtaata ctactatata aattcagatt 60 31 tgggttctg ataaccgtgg tcgttaa 87 34 <210> SEQ ID NO: 2 35 <211> LENGTH: 92 36 <212> TYPE: DNA 37 <213> ORGANISM: soybean 39 <400> SEQUENCE: 2 40 gaattcatgg tttctcttat cttatgacat tgttgccaag taatactact atataaattc 60 42 agatttgggt ttcagataac cgtggtcgtt aa 92 45 <210> SEQ ID NO: 3
24 <211> LENGTH: 87 25 <212> TYPE: DNA 26 <213> ORGANISM: soybean 28 <400> SEQUENCE: 1 29 gaattcatgg tttctcttat gacattgttg ccaagtaata ctactatata aattcagatt 60 31 tgggtttctg ataaccgtgg tcgttaa 87 34 <210> SEQ ID NO: 2 35 <211> LENGTH: 92 36 <212> TYPE: DNA 37 <213> ORGANISM: soybean 39 <400> SEQUENCE: 2 40 gaattcatgg tttctcttat cttatgacat tgttgccaag taatactact atataaattc 60 42 agatttgggt ttcagataac cgtggtcgtt aa 92 45 <210> SEQ ID NO: 3
25 <212> TYPE: DNA 26 <213> ORGANISM: soybean 28 <400> SEQUENCE: 1 29 gaattcatgg tttctcttat gacattgttg ccaagtaata ctactatata aattcagatt 31 tgggtttctg ataaccgtgg tcgttaa 87 34 <210> SEQ ID NO: 2 35 <211> LENGTH: 92 36 <212> TYPE: DNA 37 <213> ORGANISM: soybean 39 <400> SEQUENCE: 2 40 gaattcatgg tttctcttat cttatgacat tgttgccaag taatactact atataaattc 40 42 agatttgggt ttcagataac cgtggtcgtt aa 40
26 <213> ORGANISM: soybean 28 <400> SEQUENCE: 1 29 gaattcatgg tttctcttat gacattgttg ccaagtaata ctactatata aattcagatt 60 31 tgggtttctg ataaccgtgg tcgttaa 87 34 <210> SEQ ID NO: 2 35 <211> LENGTH: 92 36 <212> TYPE: DNA 37 <213> ORGANISM: soybean 39 <400> SEQUENCE: 2 40 gaattcatgg tttctcttat cttatgacat tgttgccaag taatactact atataaattc 60 42 agatttgggt ttcagataac cgtggtcgtt aa 92 45 <210> SEQ ID NO: 3
28 <400> SEQUENCE: 1 29 gaattcatgg tttctcttat gacattgttg ccaagtaata ctactatata aattcagatt 31 tgggtttctg ataaccgtgg tcgttaa 87 34 <210> SEQ ID NO: 2 35 <211> LENGTH: 92 36 <212> TYPE: DNA 37 <213> ORGANISM: soybean 39 <400> SEQUENCE: 2 40 gaattcatgg tttctcttat cttatgacat tgttgccaag taatactact atataaattc 42 agatttgggt ttcagataac cgtggtcgtt aa 92 45 <210> SEQ ID NO: 3
29 gaattcatgg tttctcttat gacattgttg ccaagtaata ctactatata aattcagatt 60 31 tgggtttctg ataaccgtgg tcgttaa 87 34 <210> SEQ ID NO: 2 35 <211> LENGTH: 92 36 <212> TYPE: DNA 37 <213> ORGANISM: soybean 39 <400> SEQUENCE: 2 40 gaattcatgg tttctcttat cttatgacat tgttgccaag taatactact atataaattc 60 42 agatttgggt ttcagataac cgtggtcgtt aa 92 45 <210> SEQ ID NO: 3
31 tgggtttctg ataaccgtgg tcgttaa 87 34 <210> SEQ ID NO: 2 35 <211> LENGTH: 92 36 <212> TYPE: DNA 37 <213> ORGANISM: soybean 39 <400> SEQUENCE: 2 40 gaattcatgg tttctcttat cttatgacat tgttgccaag taatactact atataaattc 60 42 agatttgggt ttcagataac cgtggtcgtt aa 92 45 <210> SEQ ID NO: 3
34 <210> SEQ ID NO: 2 35 <211> LENGTH: 92 36 <212> TYPE: DNA 37 <213> ORGANISM: soybean 39 <400> SEQUENCE: 2 40 gaattcatgg tttctcttat cttatgacat tgttgccaag taatactact atataaattc 42 agatttgggt ttcagataac cgtggtcgtt aa 92 45 <210> SEQ ID NO: 3
35 <211> LENGTH: 92 36 <212> TYPE: DNA 37 <213> ORGANISM: soybean 39 <400> SEQUENCE: 2 40 gaattcatgg tttctcttat cttatgacat tgttgccaag taatactact atataaattc 40 42 agatttgggt ttcagataac cgtggtcgtt aa 45 <210> SEQ ID NO: 3
36 <212> TYPE: DNA 37 <213> ORGANISM: soybean 39 <400> SEQUENCE: 2 40 gaattcatgg tttctcttat cttatgacat tgttgccaag taatactact atataaattc 60 42 agatttgggt ttcagataac cgtggtcgtt aa 92 45 <210> SEQ ID NO: 3
37 <213> ORGANISM: soybean 39 <400> SEQUENCE: 2 40 gaattcatgg tttctcttat cttatgacat tgttgccaag taatactact atataaattc 60 42 agatttgggt ttcagataac cgtggtcgtt aa 92 45 <210> SEQ ID NO: 3
39 <400> SEQUENCE: 2 40 gaattcatgg tttctcttat cttatgacat tgttgccaag taatactact atataaattc 60 42 agatttgggt ttcagataac cgtggtcgtt aa 92 45 <210> SEQ ID NO: 3
40 gaattcatgg tttctcttat cttatgacat tgttgccaag taatactact atataaattc 60 42 agatttgggt ttcagataac cgtggtcgtt aa 92 45 <210> SEQ ID NO: 3
45 <210> SEQ ID NO: 3
46 <211> LENGTH: 113
47 <212> TYPE: DNA
48 <213> ORGANISM: soybean
50 <400> SEQUENCE: 3
51 gaattootaa tataogagtg aatattattg taatgottgt aaaaaaacat gataaaatgo 60
53 aaaaatttgg ggtgaatttt tacgacatta gtgaaaaaaa catatccctt taa 113
56 <210> SEQ ID NO: 4
57 <211> LENGTH: 135
58 <212> TYPE: DNA
59 <213> ORGANISM: soybean
61 <400> SEQUENCE: 4 62 ttaaagggat atgittitt cactaatgci glaaaaattc acccagatti tigcattitc 60
62 ttaaagggat atgttttttt cactaatgct gtaaaaattc acccagattt ttgcattttc 60 64 tttgaaaaaa tgtactagat atatcatgtt tttttacaag cattacaata atattcactc 120
66 gtatattagg aatto
69 <210> SEQ ID NO: 5

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/772,134B

DATE: 02/11/2002 TIME: 14:30:53

Input Set : A:\EP.txt
Output Set: N:\CRF3\02112002\1772134B.raw

	•
70 <211> LENGTH: 116	
71 <212> TYPE: DNA	
72 <213> ORGANISM: soybean	
74 <400> SEQUENCE: 5	
75 gaatteeggt tateteagae aacttttgtt tggtttggtt atagtaaaga caegattate	60
77 caggetttga gaggeataga aataattttt ttatataaaa aaaaaagtet etttaa	116
80 <210> SEQ ID NO: 6	
81 <211> LENGTH: 113	
82 <212> TYPE: DNA	
83 <213> ORGANISM: soybean	
85 <400> SEQUENCE: 6	
86 gaattteggt tateteagae aacttttgtt tggtttggtt atagtaaaga caegattate	60
88 caggetttga gaggeataga aataattttt ttatataaaa aaaagtetet tta	113
91 <210> SEQ ID NO: 7	
92 <211> LENGTH: 409	
93 <212> TYPE: DNA	
94 <213> ORGANISM: soybean - Forrest	
96 <400> SEQUENCE: 7	
97 gagtaaaacc ttgcgtgtga tcggtattac agtacgcagg gccaatcaac taaaatatct	60
99 gcaaacgata atataattat aagaaaaaga cacactttga gggcattttt gacttgagag	120
101 aactcaggta tcaatctaaa agcaacgctg ttcaccttga gctgaaacac ctggaggaga	180
103 aagcaaagca aaccaaacgc gagagagaaa taaagaacgg aaacagagag agagagagga	240
105 aggacettgt teaaageaac ggggacaact ttagageeet ggegegegtg ggggteaata	300
107 agcgtaacct ggctgaggag agcctcggcg tcgtccttgc tgaagcagaa gaggaagagc	360
109 acgagaccaa gagaaactcc tcggaagcaa cgggaattgg tacgcagtc	409
112 <210> SEQ ID NO: 8	
113 <211> LENGTH: 417	
114 <212> TYPE: DNA	
115 <213> ORGANISM: soybean	
117 <400> SEQUENCE: 8	
118 gagtaaaacc ttgcgtgtga tcggtattac agtacgcagg gccatggttt gagccaatca	60
120 actaaaatat ttgcaaacga taatataatt ataagaaaaa gactcacttt gagggcattt	120
122 ttgacttgag agaactcagg tatcaatcta aaagcaacgc tgttcacctt gagctgaaac	180
124 acctggagga gaaagcaaag caaaccaaac gcgagagaga aataaagaac ggaaacagag	240
126 agagaggaag gaccttgttc aaagcaacgg ggacaacttt agagccctgg cgcgcgtggg	300
128 ggtcaataag cgtaacctgg ctgaggagag cctcggcgcc gtccttgctg aagcagaaga	360
130 ggaagageee gagaceaaga gaaacteete ggaageaaeg ggaattggta egeagte	417
133 <210> SEQ ID NO: 9	
134 <211> LENGTH: 165	
135 <212> TYPE: DNA	
136 <213> ORGANISM: soybean	
138 <400> SEQUENCE: 9	
139 gagtaaatga aaatcgatca aaatcaaata atatatgctt tttttagttg tgttcaagta	60
141 acttttttt attgaaaaaa tcgacccaag ttgaaacaca tgtttgagaa ttgttttgtg	120
143 catccaacgt ttttcttgta caatcagctg tgagagggga attgg	165
146 <210> SEQ ID NO: 10	
147 <211> LENGTH: 164	
148 <212> TYPE: DNA	
149 <213> ORGANISM: soybean	

RAW SEQUENCE LISTING PATENT APPLICATION: US/09/772,134B DATE: 02/11/2002 TIME: 14:30:53

Input Set : A:\EP.txt
Output Set: N:\CRF3\02112002\1772134B.raw

	<400> SEQUENCE: 10		++++++	~~++~~~~+~	60								
	gagtaaatga aaatcgatca aaatcaaa ctttttttta ttgaaaaaat cgacccaa												
	atccaacgtt tttcttgtac aatcagct			tgttttgtgt	164								
	<210> SEQ ID NO: 11	.gc ya <u>q</u> ayyyyaa	ccyy		104								
	**												
	<pre><211> LENGTH: 114 <212> TYPE: DNA</pre>												
	<213> ORGANISM: soybean												
	<400> SEQUENCE: 11												
	gaattcccag ctagatttgt atcaaaca	tg tattgtccac	aaaatgttca	agcatettag	60								
	ggaactgcta ttcttacttc taaatttt				114								
	<210> SEQ ID NO: 12	.cc accyaoacoo	aaagegegee	0044									
	<211> LENGTH: 114			*									
	<212> TYPE: DNA												
	<213> ORGANISM: soybean												
	<400> SEQUENCE: 12												
	gaattcccag ccagatttgt atcaaaca	tg tattgtccac	aaaatgttca	agcatcttag	60								
	ggaactgcta ttcttacttc taaatttt				114								
	<210> SEQ ID NO: 13	,	3 3 3										
	<211> LENGTH: 3106												
183	<212> TYPE: DNA												
	<213> ORGANISM: soybean			٠									
	6 <220> FEATURE:												
	<221> NAME/KEY: misc_feature												
188	<222> LOCATION: (1)(3106)												
188 189	<222> LOCATION: (1)(3106) <223> OTHER INFORMATION: n is	an undetermin	ed nucleotio	de (dATP, d	CTP, dGTP,	or dTTP)							
189	<pre><222> LOCATION: (1)(3106) <223> OTHER INFORMATION: n is <400> SEQUENCE: 13</pre>	an undetermin	ed nucleotio	de (dATP, d	CTP, dGTP,	or dTTP)							
189 192	<223> OTHER INFORMATION: n is				•	or dTTP)							
189 192 193 195	<pre><223> OTHER INFORMATION: n is <400> SEQUENCE: 13 aatgggagga gtgggaaaga cagtggct aagtgtgctc agggacaggt tattgtga</pre>	at ggagettgtt te cagetteett	ccggaggttg ggaagggttt	ggttggaatc gaggggtcga	60 120	or dTTP)							
189 192 193 195 197	<pre><223> OTHER INFORMATION: n is <400> SEQUENCE: 13 aatgggagga gtgggaaaga cagtggct aagtgtgctc agggacaggt tattgtga atcaccgaca aaattggcca acttcaag</pre>	at ggagcttgtt tc cagcttcctt gc ctcaggaagc	ccggaggttg ggaagggttt ttagtcttca	ggttggaatc gaggggtcga tgataaccaa	60 120 180	or dTTP)							
189 192 193 195 197 199	<pre><223> OTHER INFORMATION: n is <400> SEQUENCE: 13 aatgggagga gtgggaaaga cagtggct aagtgtgctc agggacaggt tattgtga atcaccgaca aaattggcca acttcaag attggtggtt caatcccttc aactttgg</pre>	at ggagettgtt te cagetteett ge eteaggaage ga ettetteeca	ccggaggttg ggaagggttt ttagtcttca accttagagg	ggttggaatc gaggggtcga tgataaccaa ggttcagtta	60 120 180 240	or dTTP)							
189 192 193 195 197 199 201	<pre><223> OTHER INFORMATION: n is <400> SEQUENCE: 13 aatgggagga gtgggaaaga cagtggct aagtgtgctc agggacaggt tattgtga atcaccgaca aaattggcca acttcaag attggtggtt caatcccttc aactttgg ttcaacaata ggcttacagg ttccatac</pre>	at ggagettgtt te cagetteett ge etcaggaage ga ettetteeca et etttettag	ccggaggttg ggaagggttt ttagtcttca accttagagg gtttctgcct	ggttggaatc gaggggtcga tgataaccaa ggttcagtta ttgcttcaag	60 120 180 240 300	or dTTP)							
189 192 193 195 197 199 201 203	<pre><223> OTHER INFORMATION: n is <400> SEQUENCE: 13 aatgggagga gtgggaaaga cagtggct aagtgtgctc agggacaggt tattgtga atcaccgaca aaattggcca acttcaag attggtggtt caatcccttc aactttgg ttcaacaata ggcttacagg ttccatac tctcttgacc tcagcaacaa cttgctca</pre>	at ggagcttgtt tc cagcttcctt gc ctcaggaagc ga cttcttccca ct ctttctttag ca ggagcaatcc	ccggaggttg ggaagggttt ttagtcttca accttagagg gtttctgcct cttatagtct	ggttggaatc gaggggtcga tgataaccaa ggttcagtta ttgcttcaag tgctaattcc	60 120 180 240 300 360	or dTTP)							
189 192 193 195 197 199 201 203 205	<pre><223> OTHER INFORMATION: n is <400> SEQUENCE: 13 aatgggagga gtgggaaaga cagtggct aagtgtgctc agggacaggt tattgtga atcaccgaca aaattggcca acttcaag attggtggtt caatcccttc aactttgg ttcaacaata ggcttacagg ttccatac tctcttgacc tcagcaacaa cttgctca actaagcttt attggcttaa cttgagtt</pre>	at ggagcttgtt tc cagcttcctt gc ctcaggaagc ga cttcttccca ct ctttctttag ca ggagcaatcc tc aactccttct	ccggaggttg ggaagggttt ttagtcttca accttagagg gtttctgcct cttatagtct ctggtccttt	ggttggaatc gaggggtcga tgataaccaa ggttcagtta ttgcttcaag tgctaattcc accagctagc	60 120 180 240 300 360 420	or dTTP)							
189 192 193 195 197 199 201 203 205 207	<pre><223> OTHER INFORMATION: n is <400> SEQUENCE: 13 aatgggagga gtgggaaaga cagtggct aagtgtgctc agggacaggt tattgtga atcaccgaca aaattggcca acttcaag attggtggtt caatcccttc aactttgg ttcaacaata ggcttacagg ttccatac tctcttgacc tcagcaacaa cttgctca actaagcttt attggcttaa cttgagtt ctaactcact cattttctct cacttttc</pre>	at ggagettgtt te cagetteett ge eteaggaage ga ettetteeca et etttetttag ca ggageaatee te aacteettet tt tetetteaa	ccggaggttg ggaagggttt ttagtcttca accttagagg gtttctgcct cttatagtct ctggtccttt ataacaatct	ggttggaatc gaggggtcga tgataaccaa ggttcagtta ttgcttcaag tgctaattcc accagctagc ttctggctcc	60 120 180 240 300 360 420 480	or dTTP)							
189 192 193 195 197 199 201 203 205 207 209	<pre><223> OTHER INFORMATION: n is <400> SEQUENCE: 13 aatgggagga gtgggaaaga cagtggct aagtgtgctc agggacaggt tattgtga atcaccgaca aaattggcca acttcaag attggtggt caatcccttc aactttgg ttcaacaata ggcttacagg ttccatac tctcttgacc tcagcaacaa cttgctca actaagcttt attggcttaa cttgagtt ctaactcact cattttctct cacttttc cttcctaact cttggggtgg gaattcca</pre>	at ggagettgtt te eagetteett ge eteaggaage ga ettetteea et ettetttag ca ggageaatee te aacteettet tt tetetteaa ag aatggettet	ccggaggttg ggaagggttt ttagtcttca accttagagg gtttctgcct cttatagtct ctggtccttt ataacaatct ttaggcttca	ggttggaatc gaggggtcga tgataaccaa ggttcagtta ttgcttcaag tgctaattcc accagctagc ttctggctcc aaatttgatc	60 120 180 240 300 360 420 480 540	or dTTP)							
189 192 193 195 197 199 201 203 205 207 209 211	<pre><223> OTHER INFORMATION: n is <400> SEQUENCE: 13 aatgggagga gtgggaaaga cagtggct aagtgtgctc agggacaggt tattgtga atcaccgaca aaattggcca acttcaag attggtggt caatcccttc aactttgg ttcaacaata ggcttacagg ttccatac tctcttgacc tcagcaacaa cttgctca actaagcttt attggcttaa cttgagtt ctaactcact cattttctct cacttttc cttcctaact cttggggtgg gaattcca ctagatcata acttttcac tggtgacg</pre>	at ggagettgtt te eagetteett ge eteaggaage ga ettetteea et ettetttag ca ggageaatee te aacteettet tt tetetteaaa ag aatggettet tt eetgettet	ccggaggttg ggaagggttt ttagtcttca accttagagg gtttctgcct cttatagtct ctggtccttt ataacaatct ttaggcttca tgggtagctt	ggttggaatc gaggggtcga tgataaccaa ggttcagtta ttgcttcaag tgctaattcc accagctagc ttctggctcc aatttgatc aagagagctc	60 120 180 240 300 360 420 480 540	or dTTP)							
189 192 193 195 197 199 201 203 205 207 209 211 213	<pre><223> OTHER INFORMATION: n is <400> SEQUENCE: 13 aatgggagga gtgggaaaga cagtggct aagtgtgctc agggacaggt tattgtga atcaccgaca aaattggcca acttcaag attggtggtt caatcccttc aactttag ttcaacaata ggcttacagg ttccatag tctcttgacc tcagcaacaa cttgctca actaagcttt attggcttaa cttgagtt ctaactcact cattttctc cacttttc cttcctaact cttggggtgg gaattcca ctagatcata acttttcac tggtgacg aatgagattt cccttagtca taataagt</pre>	at ggagcttgtt tc cagcttcctt gc ctcaggaagc ga cttcttcca ct ctttcttag ca ggagcaatcc tc aactccttct tt tctcttcaaa ag aatggcttct tt cctgcttct tt agtggagcta	ccggaggttg ggaagggttt ttagtctca accttagagg gtttctgcct cttatagtct ctggtccttt ataacaatct ttaggcttca tgggtagctt taccaaatga	ggttggaatc gaggggtcga tgataaccaa ggttcagtta ttgcttcaag tgctaattcc accagctagc ttctggctcc aaatttgatc aagagagctc aataggaacc	60 120 180 240 300 360 420 480 540 600 660	or dTTP)							
189 192 193 195 197 199 201 203 205 207 209 211 213 215	<pre><223> OTHER INFORMATION: n is <400> SEQUENCE: 13 aatgggagga gtgggaaaga cagtggct aagtgtgctc agggacaggt tattgtga atcaccgaca aaattggcca acttcaag attggtggtt caatcccttc aactttgg ttcaacaata ggcttacagg ttccatac tctcttgacc tcagcaacaa cttgctca actaagcttt attggcttaa cttgagtt ctaactcact cattttctct cacttttc cttcctaact cttggggtgg gaattcca ctagatcata actttttcac tggtgacg aatgagattt cccttagtca taataagt cttctaggc ttaagacact tgacattt</pre>	at ggagcttgtt tc cagcttcctt gc ctcaggaagc ga cttcttccc ct cttctttag ca ggagcaatcc tc aactccttct tt tctcttcaaa ag aatggcttct tt cctgcttctt tt agtggagcta ct aataatgcct	ccggaggttg ggaagggttt ttagtctca accttagagg gtttctgcct cttatagtct ctggtccttt ataacaatct ttaggcttca tgggtagctt taccaaatga tgaatgggaa	ggttggaatc gaggggtcga tgataaccaa ggttcagtta ttgcttcaag tgctaattcc accagctagc ttctggctcc aaatttgatc aagagagctc aataggaacc cttgcctgct	60 120 180 240 300 360 420 480 540 600 660 720	or dTTP)							
189 192 193 195 197 199 201 203 205 207 209 211 213 215 217	<pre><223> OTHER INFORMATION: n is <400> SEQUENCE: 13 aatgggagga gtgggaaaga cagtggct aagtgtgctc agggacaggt tattgtga atcaccgaca aaattggcca acttcaag attggtggtt caatcccttc aactttgg ttcaacaata ggcttacagg ttccataa tctcttgacc tcagcaacaa cttgctca actaagcttt attggcttaa cttgagtt ctaactcact cattttctct cacttttc cttcctaact cttggggtgg gaattcca cagatcata acttttcac tggtgacg aatgagattt cccttagtca taataagt ctttctaggc ttaagacact tgacattt accctctcta atttacctc acttacac</pre>	at ggagettgtt te cagetteett ge eteaggaage ga ettetteeca et ettetttag ea ggageaatee te aacteettet tt tetetteaaa ag aatggettet tt eetgettett tt agtggageta et aataatgeet tg etgaatgeag	ccggaggttg ggaagggttt ttagtcttca accttagagg gtttctgcct cttatagtct ctggtccttt ataacaatct ttaggcttca tgggtagctt taccaaatga tgaatgggaa agaacaacct	ggttggaatc gaggggtcga tgataaccaa ggttcagtta ttgcttcaag tgctaattcc accagctagc ttctggctcc aaatttgatc aagagagctc aataggaacc cttgcctgct ccttgacaat	60 120 180 240 300 360 420 480 540 600 660 720 780	or dTTP)							
189 192 193 195 197 199 201 203 205 207 209 211 213 215 217 219	<pre><223> OTHER INFORMATION: n is <400> SEQUENCE: 13 aatgggagga gtgggaaaga cagtggct aagtgtgctc agggacaggt tattgtga atcaccgaca aaattggcca acttcaag attggtggtt caatcccttc aactttgg ttcaacaata ggcttacagg ttccatac tctcttgacc tcagcaacaa cttgctca actaagcttt attggcttaa cttgagtt ctaactcact cattttctct cacttttc cttcctaact cttggggtgg gaattcca catgatcata acttttcac tggtgacg aatgagattt cccttagtca taataagt ctttctaggc ttaagacact tgacattt accctctcta atttacctc acttacac caaatccctc aaagtttagg tagattgc</pre>	at ggagettgtt te cagetteett ge eteaggaage ga ettetteeca et ettetttag ea ggageaatee te aacteettet tt tetetteaaa ag aatggettet tt eetgettett tt agtggageta et aataatgeet tg etgaatgeag gt aatettetg	ccggaggttg ggaagggttt ttagtcttca accttagagg gtttctgcct cttatagtct ctggtccttt ataacaatct ttaggcttca tgggtagctt taccaaatga tgaatgggaa agaacaacct ttctgatttt	ggttggaatc gaggggtcga tgataaccaa ggttcagtta ttgcttcaag tgctaattcc accagctagc ttctggctcc aaatttgatc aagagagctc aataggaacc cttgcctgct ccttgacaat gagtagaaac	60 120 180 240 300 360 420 480 540 600 660 720 780 840	or dTTP)							
189 192 193 195 197 199 201 203 205 207 209 211 213 215 217 219 221	<pre><223> OTHER INFORMATION: n is <400> SEQUENCE: 13 aatgggagga gtgggaaaga cagtggct aagtgtgctc agggacaggt tattgtga atcaccgaca aaattggcca acttcaag attggtggtt caatcccttc aactttgg ttcaacaata ggcttacagg ttccatac tctcttgacc tcagcaacaa cttgctca actaagcttt attggcttaa cttgagtt ctaactcact cattttctct cacttttc cttcctaact cttggggtgg gaattcca catgatcata acttttcac tggtgacg aatgagattt cccttagtca taataagt ctttctaggc ttaagacact tgacattt accctctcta atttacctc acttacac caaatccctc aaagtttagg tagattgc caatttagtg gacatattcc ttcaagca</pre>	at ggagcttgtt tc cagcttcctt gc ctcaggaagc ga cttcttccca ct ctttctttag ca ggagcaatcc tc aactccttct tt tctcttcaaa ag aatggcttct tt cctgcttct tt agtggagcta ct aataatgcct tg ctgaatgcag gt aatcttctg tt gcaaacattt	ccggaggttg ggaagggttt ttagtcttca accttagagg gtttctgcct cttatagtct ctggtccttt ataacaatct ttaggcttca tgggtagctt taccaaatga tgaatgggaa agaacaacct ttctgatttt cctcgcttag	ggttggaatc gaggggtcga tgataaccaa ggttcagtta ttgcttcaag tgctaattcc accagctagc ttctggctcc aaatttgatc aagagagctc aataggaacc cttgcctgct ccttgacaat gagtagaaac gcagcttgat	60 120 180 240 300 360 420 480 540 600 660 720 780 840 900	or dTTP)							
189 192 193 195 197 199 201 203 205 207 209 211 213 215 217 219 221 223	<pre><223> OTHER INFORMATION: n is <400> SEQUENCE: 13 aatggagga gtgggaaaga cagtggct aagtgtgctc agggacaggt tattgtga atcaccgaca aaattggcca acttcaag attggtggt caatcccttc aactttgg ttcaacaata ggcttacagg ttccatag tctcttgacc tcagcaacaa cttgctca actaagcttt attggcttaa cttgagtt ctaactcact cattttctct cacttttc cttcctaact cttggggtgg gaattcca atgagattt cccttagtca taataagt ctttctaggc ttaagacact tgacattt accctctcta atttacctc acttacac caaatccctc aaagtttagg tagattgc caatttagtg gacatattcc ttcaagca ttgtcactga ataattccg tggagaaa</pre>	at ggagcttgtt tc cagcttcctt gc ctcaggaagc ga cttcttccca ct ctttctttag ca ggagcaatcc tc aactccttct tt tctcttcaaa ag aatggcttct tt agtggagcta ct aataatgcct tg ctgaatgcag gt aatcttctg tt gcaaacattt tt ccagtctct	ccggaggttg ggaagggttt ttagtcttca accttagagg gttctgcct cttatagtct ctggtccttt ataacaatct ttaggcttca tgggtagctt taccaaatga tgaatgggaa agaacaacct ttctgattt cctcgcttag ttgacagtca	ggttggaatc gaggggtcga tgataaccaa ggttcagtta ttgcttcaag tgctaattcc accagctagc ttctggctcc aaatttgatc aagagagctc aataggaacc cttgcctgct ccttgacaat gagtagaaac gcagcttgat gcgcagtcta	60 120 180 240 300 360 420 480 540 600 660 720 780 840 900 960	or dTTP)							
189 192 193 195 197 199 201 203 205 207 209 211 213 215 217 219 221 223 225	<pre><223> OTHER INFORMATION: n is <400> SEQUENCE: 13 aatggagga gtgggaaaga cagtggct aagtgtgctc agggacaggt tattgtga atcaccgaca aaattggcca acttcaag attggtggt caatcccttc aactttgg ttcaacaata ggcttacagg ttccatac tctcttgacc tcagcaacaa cttgctca actaagcttt attggcttaa cttgagtt ctaactcact cattttctct cacttttc cttcctaact cttggggtgg gaattcca atgagattt cccttagtca taataagt ctttctaggc ttaagacact tgacattt accctctca atttacctc acttacac caaatccctc aaagtttagg tagattgc caatttagtg gacatattcc ttcaagca ttgtcactga ataattcct caatagcac aatcctctca atgattagg tagagaaa aatctcttca atgttccta caatagcac aatgagaata cccaaatccc</pre>	at ggagettgtt te cagetteett ge eteaggaage ga ettetteea et ettetttag ca ggageaatee te aaeteettet tt tetetteaa ag aatggettet tt agtggageta et aataatgeet tg etgaatgeag gt aatettetg tt geaaaeatt tt eeagtteet tt teaggtteet	ccggaggttg ggaagggttt ttagtcttca accttagagg gtttctgcct cttatagtct ctggtccttt ataacaatct ttaggcttca tgggtagctt taccaaatga tgaatgggaa agaacaacct ttctgattt cctcgcttag ttgacagtca tcccccctct	ggttggaatc gaggggtcga tgataaccaa ggttcagtta ttgcttcaag tgctaattcc accagctagc ttctggctcc aaatttgatc aagagagctc aataggaacc cttgcctgct ccttgacaat gagtagaaac gcagcttgat gcgcagtcta gcttgccaag	60 120 180 240 300 360 420 480 540 600 660 720 780 840 900 960 1020	or dTTP)							
189 192 193 195 197 199 201 203 205 207 209 211 213 215 217 219 221 223 225 227	<pre><223> OTHER INFORMATION: n is <400> SEQUENCE: 13 aatggagga gtgggaaaga cagtggct aagtgtgctc agggacaggt tattgtga atcaccgaca aaattggcca acttcaag attggtggt caatcccttc aactttgg ttcaacaata ggcttacagg ttccatac tctcttgacc tcagcaacaa cttgctca actaagcttt attggcttaa cttgagtt ctaactcact cattttctct cacttttc cttcctaact cttggggtgg gaattcca aatgagattt cccttagtca taataagt cttctaggc ttaagacact tggcactt accctctca atttacctc acttacac caaatccctc aatgatagg tagaattg caatttagtg gacatattcc ttcaagca ttgtcactga ataattccat caatagca aatctctca atgttccta caatagca aatttaact caagctcatt tgtgggaaa aatctcttca atgttccta caatagca aatttaact caagctcatt tgtgggaaa aatttaact caagctcatt tgtgggaaa aatttaact caagctcatt tgtgggaaa</pre>	at ggagettgtt te cagetteett ge eteaggaage ga ettetteea et ettetttag ca ggageaatee te aaeteettet tt tetetteaa ag aatggettet tt agtggageta et aataatgeet tg etgaatgeag gt aatettetg tt geaaaeatt tt eeagtteet tt eeagtteet te teaggttet at eaggttet ga ateaaeta	ccggaggttg ggaagggttt ttagtcttca accttagagg gtttctgcct cttatagtct ctggtccttt ataacaatct ttaggcttca tgggtagctt taccaaatga tgaatgggaa agaacaacct ttctgatttt cctcgcttag ttgacagtca tcgggtacag	ggttggaatc gaggggtcga tgataaccaa ggttcagtta ttgcttcaag tgctaattcc accagctagc ttctggctcc aaatttgatc aagagagctc aataggaacc cttgcctgct ccttgacaat gagtagaaac gcagcttgat gcgcagtcta gcttgccaag cccttcaacc	60 120 180 240 300 360 420 480 540 600 660 720 780 840 900 960 1020 1080	or dTTP)							
189 192 193 195 197 199 201 203 205 207 209 211 213 215 217 219 221 223 225 227	<pre><223> OTHER INFORMATION: n is <400> SEQUENCE: 13 aatggagga gtgggaaaga cagtggct aagtgtgctc agggacaggt tattgtga atcaccgaca aaattggcca acttcaag attggtggt caatcccttc aactttgg ttcaacaata ggcttacagg ttccatac tctcttgacc tcagcaacaa cttgctca actaagcttt attggcttaa cttgagtt ctaactcact cattttctct cacttttc cttcctaact cttggggtgg gaattcca aatgagattt cccttagtca taataagt cttctaggc ttaagacact tggtgacg ctttctaggc ttaagacact tgacattt accctctca atttacctc acttacac caaatccctc aaagtttagg tagattgc caatttagtg gacatattcc ttcaagca ttgtcactga ataattccta caatagcc aaatttaact caagctcatt tgtgggaaa accatgtcttt cccaagctcc atcacaag ccatgtcttt cccaagctcc atcacaag ccatgtcttt cccaagctcc atcacaag</pre>	at ggagettgtt te cagetteett ge eteaggaage ga ettetteea et ettetttag ca ggageaatee te aaeteettet tt tetetteaa ag aatggettet tt agtggageta et aataatgeet tg etgaatgeag gt aatettetg tt geaaaeatt tt eeagtteet tt teaggtteet tt eaggtteet tt agtgagea	ccggaggttg ggaagggttt ttagtcttca accttagagg gtttctgcct cttatagtct ctggtccttt ataacaatct ttaggcttca tgggtagctt taccaaatga tgaatgggaa agaacaacct ttctgatttt cctcgcttag ttgacagtca tcgccctct gtgggtacag cacctcctga	ggttggaatc gaggggtcga tgataaccaa ggttcagtta ttgcttcaag tgctaattcc accagctagc ttctggctcc aaatttgatc aagagagctc aataggaacc cttgcctgct ccttgacaat gagtagaaac gcagcttgat gcgcagtcta gcttgccaag cccttcaacc agtgtcaaaa	60 120 180 240 300 360 420 480 540 600 660 720 780 840 900 960 1020 1080 1140	or dTTP)							
189 192 193 195 197 199 201 203 205 207 209 211 213 215 217 219 221 223 225 227 229 231	<pre><223> OTHER INFORMATION: n is <400> SEQUENCE: 13 aatggagga gtgggaaaga cagtggct aagtgtgctc agggacaggt tattgtga atcaccgaca aaattggcca acttcaag attggtggt caatcccttc aactttgg ttcaacaata ggcttacagg ttccatac tctcttgacc tcagcaacaa cttgctca actaagcttt attggcttaa cttgagtt ctaactcact cattttctct cacttttc cttcctaact cttggggtgg gaattcca aatgagattt cccttagtca taataagt cttctaggc ttaagacact tggtgacg cttgtcacta acttttccc acttacc caatccctc aattacctc acttaccc caaatccctc aattacctc acttacac caaatcctca attacctc tcaagcac ttgtcactga ataattcca tggagaaa aatctcttca atgttccta caatagcc aaatttaact caagctcatt tgtgggaa ccatgtcttt cccaagctcc atcacaag catcaccatc ataggaagct aagcacca aagcaccatc aaggaagct aaggaagct aagcaccatc aaggaagct aagcaccatc aaggaagct aagcaccatc aaggaagct aagcaccatc aaggaagct aagcaccatc aagcaccatc aaggaagct aagcaccatc aagcaccatc aaggaagct aagcaccatc aagcac</pre>	at ggagettgtt te cagetteett ge eteaggaage ga ettetteea et ettetttag ca ggageaatee te aacteettet tt tetetteaaa ag aatggettet tt agtggageta et aataatgeet tg etgaatgeag gt actettetg tt geaaacatt tt eeagtteet tt teaggtteet te teaggtteet at teaggtteet at eagteee at atteaaetat ga gaeataatte	ccggaggttg ggaagggttt ttagtcttca accttagagg gtttctgcct cttatagtct ctggtccttt ataacaatct ttaggcttca tgggtagctt taccaaatga tgaatgggaa agaacaacct ttctgatttt cctcgcttag ttgacagtca tcgccctct gtgggtacag cacctcctga tcatagtagc	ggttggaatc gaggggtcga tgataaccaa ggttcagtta ttgcttcaag tgctaattcc accagctagc ttctggctcc aaatttgatc aagagagctc aataggaacc cttgcctgct ccttgacaat gagtagaaac gcagcttgat gcgcagtcta gcttgccaag ccttcaacc agtgtcaaaa aggagttctc	60 120 180 240 300 360 420 480 540 600 660 720 780 840 900 960 1020 1080 1140 1200	or dTTP)							
189 192 193 195 197 199 201 203 205 207 209 211 213 215 217 219 221 223 225 227 229 231 233	<pre><223> OTHER INFORMATION: n is <400> SEQUENCE: 13 aatggagga gtgggaaaga cagtggct aagtgtgctc agggacaggt tattgtga atcaccgaca aaattggcca acttcaag attggtggt caatcccttc aactttgg ttcaacaata ggcttacagg ttccatac tctcttgacc tcagcaacaa cttgctca actaagcttt attggcttaa cttgagtt ctaactcact cattttctct cacttttc cttcctaact cttggggtgg gaattcca aatgagattt cccttagtca taataagt cttctaggc ttaagacact tggtgacg ctttctaggc ttaagacact tgacattt accctctca atttacctc acttacac caaatccctc aaagtttagg tagattgc caatttagtg gacatattcc ttcaagca ttgtcactga ataattccta caatagcc aaatttaact caagctcatt tgtgggaaa accatgtcttt cccaagctcc atcacaag ccatgtcttt cccaagctcc atcacaag ccatgtcttt cccaagctcc atcacaag</pre>	at ggagcttgtt tc cagcttcctt gc ctcaggaagc ga cttcttcca ct ctttctttag ca ggagcaatcc tc aactccttct tt tctcttcaaa ag aatggcttct tt agtggagcta ct aataatgcct tg ctgaatgcag gt aatcttctg tt ccagtctct tt ccagtctcct tc tcaggttctg at atcaactat ga gtcattgccc aa gacataattc tc ctgcttttt	ccggaggttg ggaagggttt ttagtcttca accttagagg gtttctgcct cttatagtct ctggtccttt ataacaatct ttaggcttca tgggtagctt taccaaatga tgaatgggaa agaacaacct ttctgattt cctcgcttag ttgccccctc gtgggtacag cacctcctga tcatagtagc gcctgatcag	ggttggaatc gaggggtcga tgataaccaa ggttcagtta ttgcttcaag tgctaattcc accagctagc ttctggctcc aatttgatc aagagagctc actgcctgct ccttgacaat gagtagaaac gcagcttgat gcgcagtcta gcttgccaag cccttcaacc agtgtcaaaa aggagttcta aagagatctc	60 120 180 240 300 360 420 480 540 600 660 720 780 840 900 960 1020 1080 1140	or dTTP)							

RAW SEQUENCE LISTING DATE: 02/11/2002 PATENT APPLICATION: US/09/772,134B TIME: 14:30:53

Input Set : A:\EP.txt

Output Set: N:\CRF3\02112002\I772134B.raw

```
1380
     237 aaaggagtcc ctccagttgc tggtggtgat gttgaagcag gtgggggaggc tggagggaaa
     239 ctagtccatt ttgatggacc aatggctttt acagctgatg atctcttgtg tgcaacagct
                                                                              1440
                                                                              1500
     241 qaqatcatgg gaaagagcac ctatggaact gtttataagg ctattttgga ggatggaagt
     243 caagttgcag taaagagatt gagggaaaag atcactaaag gtcatagaga atttgaatca
                                                                              1560
     245 gaagtcagtg ttctaggaaa aattagacac cccaatgttt tggctctgag ggcctattac
                                                                              1620
     247 ttgqqaccca aaggggaaaa gcttctgggt tttgatacat gtctaaagga agtcttgctt
                                                                              1680
     249 ctttcctaca tggaaggttc gtgtgctggt tctttcatta aagtgttgtg tgtgctggtc
                                                                              1740
                                                                              1800
     251 tttaattata atttggagtt ttaccttagt aatctgtata attctaatcg gagaacagta
W--> 253 caaacaaaaa cacctaagga acaacacctt anctttaata taccatatca ataaagtgaa
                                                                              1860
     255 atattttett ggteatettg atgeaggggg aactgaacat teattattgg ceacaagatt
                                                                              1920
     257 aaaatageee aageettgge eegggettgt ttgeetteat teecaggaga acateataca
                                                                              1980
                                                                              2040
W--> 259 tgggaccten catecageaa tgtgtggett gatgaaaaac aaatgetaaa atteagattt
     261 tggtcttttt cgggttgatg tcaactgctg ctaattccaa cgtgatagct acagctggag
                                                                              2100
     263 cattggatac cgggcacctg agctctcaaa gctcaagaaa gcaaacacta aaactgatat
                                                                              2160
                                                                              2220
     265 ctacagtett ggtgttatet tgttagaact eetaaegagg aaateaeetg gggtgtetat
                                                                              2280
     267 gaatggacta gatttgcctc agtgggttgc ctcagttgtc aaagaggagt ggacaaatga
                                                                              2340
     269 ggtttttgat gcagacttga tgagagatgc atccacagtt ggcgacgagt tgctaaacac
                                                                              2400
     271 gttgaagete getttgeact gtgttgatee ttetecatea geacgaecag aagtteatea
     273 agttctccag cagctgaaga gattagacca gagagatcag tcacagccag tcccggggac
                                                                              2460
     275 gatatcgtat agcacaaatt ttgcattgat ttttttgtgc caaatgtagt aggcctacta
                                                                              2520
                                                                              2580
     277 tatatatgtt ctatgattct ttcattctta tattattttt gcctgtttga atgcttgaat
     279 ttgtacatac tcatactaca ataaggtgta gttctggtta attttacctc tacctcaaag
                                                                              2640
                                                                              2700
     281 ctqqqqtqta attctqtttc ctccaaggca cataatagtt gaaaatagtt ctcaggagca
     283 ttcattgttt attctgcaag attctctttc acggctgcta tcttctatgc atgccctgcc
                                                                              2760
     285 cataaatqca ttatgaagaa ttgtaacggc tgtgtttttg gacttcttca aaaagtttat
                                                                              2820
     287 gttattgcca ggtgtatata tcaacatgtt ttaaagattt tcaaacaatc aggttttaga
                                                                              2880
     289 tgtgggtttg catgcatgag attggactag tgcgcttgat gtagtataaa atataaattg
                                                                              2940
     291 tocaatcaag caccototac atgtocaaat aatgggcott atgaaactta attitttaat
                                                                              3000
W--> 293 tacaaactac agtaatcttt ttgaataaag atttacaaat tacaacngac atgtgaagcn
                                                                              3060
W--> 295 gcatctttna ttgncaatct ttcaagttac tctattattt tctgcn
                                                                              3106
     298 <210> SEO ID NO: 14
     299 <211> LENGTH: 830
     300 <212> TYPE: PRT
     301 <213> ORGANISM: soybean
     303 <220> FEATURE:
     304 <221> NAME/KEY: misc_feature
     305 <222> LOCATION: (1)..(830)
     306 <223> OTHER INFORMATION: Xaa is any amino acid
     309 <400> SEQUENCE: 14
     311 Asn Gly Arg Ser Gly Lys Asp Ser Gly Tyr Gly Ala Cys Ser Gly Gly
     312 1
                                             10
     314 Trp Val Gly Ile Lys Cys Ala Gln Gly Gln Val Ile Val Ile Gln Leu
     315
     317 Pro Trp Lys Gly Leu Arg Gly Arg Ile Thr Asp Lys Ile Gly Gln Leu
                 35
                                     40
     320 Gln Gly Leu Arg Lys Leu Ser Leu His Asp Asn Gln Ile Gly Gly Ser
                                 55
     323 Ile Pro Ser Thr Leu Gly Leu Leu Pro Asn Leu Arg Gly Val Gln Leu
                             7.0
                                                 75
```

RAW SEQUENCE LISTING DATE: 02/11/2002 PATENT APPLICATION: US/09/772,134B TIME: 14:30:53

Input Set : A:\EP.txt

Output Set: N:\CRF3\02112002\I772134B.raw

	Phe	Asn	Asn	Arg		Thr	Gly	Ser	Ile		Leu	Ser	Leu	Gly		Cys
327					85					90					95	_ •
329	Pro	Leu	Leu	Gln	Ser	Leu	Asp	Leu		Asn	Asn	Leu	Leu		GLy	Ala
330				100					105					110		
332	Ile	Pro	Tyr	Ser	Leu	Ala	Asn		Thr	Lys	Leu	Tyr		Leu	Asn	Leu
333			115					120					125			
335	Ser	Phe	Asn	Ser	Phe	Ser	Gly	Pro	Leu	Pro	Ala	Ser	Leu	Thr	His	Ser
336		130					135					140				
338	Phe	Ser	Leu	Thr	Phe	Leu	Ser	Leu	Gln	Asn	Asn	Asn	Leu	Ser	Gly	Ser
	145					150					155			•		160
341	Leu	Pro	Asn	Ser	Trp	Gly	Gly	Asn	Ser	Lys	Asn	Gly	Phe	Phe	Arg	Leu
342					165					170					175	
344	Gln	Asn	Leu	Ile	Leu	Asp	His	Asn	Phe	Phe	Thr	Gly	Asp	Val	Pro	Ala
345				180					185					190		
347	Ser	Leu	Gly	Ser	Leu	Arg	Glu	Leu	Asn	Glu	Ile	Ser	Leu	Ser	His	Asn
348			195					200		•			205			
350	Lys	Phe	Ser	Gly	Ala	Ile	Pro	Asn	Glu	·Ile	Gly	Thr	Leu	Ser	Arg	Leu
351	•	210		-			215					220				
353	Lys	Thr	Leu	Asp	Ile	Ser	Asn	Asn	Ala	Leu	Asn	Gly	Asn	Leu	Pro	Ala
	225			•		230					235	_				240
356	Thr	Leu	Ser	Asn	Leu	Ser	Ser	Leu	Thr	Leu	Leu	Asn	Ala	Glu	Asn	Asn
357					245	•				250					255	
	Leu	Leu	Asp	Asn	Gln	Ile	Pro	Gln	Ser	Leu	Gly	Arg	Leu	Arg	Asn	Leu
360			-	260					265		_	_		270		
	Ser	Val	Leu	Ile	Leu	Ser	Arg	Asn	Gln	Phe	Ser	Gly	His	Ile	Pro	Ser
363			275					280				_	285			
365	Ser	Ile	Ala	Asn	Ile	Ser	Ser	Leu	Arg	Gln	Leu	Asp	Leu	Ser	Leu	Asn
366		290					295					300				
368	Asn	Phe	Ser	Gly	Glu	Ile	Pro	Val	Ser	Phe	Asp	Ser	Gln	Arg	Ser	Leu
	305			_		310					315					320
371	Asn	Leu	Ser	Asn	Val	Ser	Tyr	Asn	Ser	Leu	Ser	Gly	Ser	Val	Pro	Pro
372					325		_			330					335	
374	Leu	Leu	Ala	Lys	Lys	Phe	Asn	Ser	Ser	Ser	Phe	Val	Gly	Asn	Ile	Gln
375				340	_				345					350		
377	Leu	Cys	Gly	Tyr	Ser	Pro	Ser	Thr	Pro	Cys	Leu	Ser	Gln	Ala	Pro	Ser
378		_	355	_				360			•		365			
380	Gln	Gly	Val	Ile	Ala	Pro	Pro	Pro	Glu	Val	Ser	Lys	His	His	His	His
381		370					375					380				
383	Arg	Lys	Leu	Ser	Thr	Lys	Asp	Ile	Ile	Leu	Ile	Val	Ala	Gly	Val	Leu
	385	-				390	_				395					400
		Val	Val	Leu	Ile	Ile	Leu	Cys	Cys	Val	Leu	Leu	Phe	Cys	Leu	Ile
387					405			-	-	410				_	415	
	Arq	Lvs	Arq	Ser	Thr	Ser	Lys	Ala	Gly	Asn	Gly	Gln	Ala	Thr	Glu	Gly
390			,	420			•		425		_			430		-
	Arg	Ala	Ala	Thr	Met	Arq	Thr	Glu	Lys	Gly	Val	Pro	Pro	Val	Ala	Gly
393			435			- 3		440	-	•			445			-
	Gly	Asp		Glu	Ala	Glv	Glv		Ala	Gly	Gly	Lys	Leu	Val	His	Phe
396	1	450				- 4	455			••	-	460				
	Asp		Pro	Met	Ala	Phe		Ala	Asp	Asp	Leu		Cys	Ala	Thr	Ala
	-	4							_	_						

Use of n and/or Xaa has been detected in the Sequence Listing.

Review the Sequence Listing to insure a corresponding explanation is presented in the <220> to <223> fields of each sequence using n or Xaa.

VERIFICATION SUMMARY PATENT APPLICATION: US/09/772,134B DATE: 02/11/2002 TIME: 14:30:54

Input Set : A:\EP.txt Output Set: N:\CRF3\02112002\I772134B.raw L:253 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13 L:259 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13 L:293 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13 L:295 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13 L:425 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14 L:428 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14 L:431 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14 L:434 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14 L:440 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14 L:443 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14 L:452 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14 L:458 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14 L:461 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14 L:473 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:15 L:481 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15 L:493 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15 L:499 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15 L:501 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15 $L\!:\!503~M\!:\!341~W\!:$ (46) "n" or "Xaa" used, for SEQ ID#:15 L:512 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:16 L:538 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16 L:547 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:17 L:553 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17 L:555 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17 L:557 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17 L:559 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17 L:561 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17 L:563 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17 L:565 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17 L:567 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17 L:569 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17 L:571 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17 L:580 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:18 L:602 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:18 $\tt L:604~M:341~W:$ (46) "n" or "Xaa" used, for SEQ ID#:18 L:606 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:18 L:608 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:18 L:610 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:18 L:621 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:19 L:639 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:19 L:643 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:19 L:645 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:19 L:647 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:19 L:649 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:19 L:651 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:19 . L:690 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20

. VERIFICATION SUMMARY

DATE: 02/11/2002

PATENT APPLICATION: US/09/772,134B

TIME: 14:30:54

Input Set : A:\EP.txt

Output Set: N:\CRF3\02112002\1772134B.raw

L:696 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20 $L:725 \ M:341 \ W:$ (46) "n" or "Xaa" used, for SEQ ID#:21 $L\!:\!727$ $M\!:\!341$ W: (46) "n" or "Xaa" used, for SEQ ID#:21 L:729 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:21 L:731 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:21 L:733 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:21 L:735 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:21 L:2035 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:58 $L:2047\ M:258\ W:$ Mandatory Feature missing, <222> not found for SEQ ID#:58 L:2049 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:58